AMENDMENTS

Listing of Claims:

The following listing of claims replaces all previous listings or versions thereof:

1. (withdrawn) A method of inhibiting a hyperproliferative cell comprising providing to the cell an effective amount of a Fortilin inhibitor, wherein the inhibitor reduces Fortilin activity in the cell.

2. (withdrawn) The method of claim 1, wherein the hyperproliferative cell is a cancer or precancer cell.

3. (withdrawn) The method of claim 2, wherein the cell is a bladder, blood, bone, bone marrow, brain, breast, colon, esophagus, gastrointestine, gum, head, kidney, liver, lung, nasopharynx, neck, ovary, prostate, skin, stomach, testis, tongue, or uterus cell.

4. (withdrawn) The method of claim 1, wherein the hyperproliferative cell is a vascular cell.

5. (withdrawn) The method of claim 1, wherein the inhibitor reduces Fortilin activity by reducing its binding to p53.

6. (withdrawn) The method of claim 1, wherein the inhibitor reduces Fortilin activity by reducing its binding to MCL1.

7. (withdrawn) The method of claim 1, wherein the inhibitor decreases the amount of Fortilin in the cell.

8. (withdrawn) The method of claim 1, wherein the inhibitor decreases expression of Fortilin.

9. (withdrawn) The method of claim 1, wherein the inhibitor decreases transcription of Fortilin.

10. (withdrawn) The method of claim 1, wherein the inhibitor decreases translation of Fortilin.

11. (withdrawn) The method of claim 1, wherein the inhibitor specifically binds Fortilin.

12. (withdrawn) The method of claim 11, wherein the inhibitor is an antibody.

13. (withdrawn) The method of claim 1, wherein the inhibitor is provided to the cell by an expression cassette comprising a nucleic acid segment encoding the inhibitor.

14. (withdrawn) The method of claim 1, wherein the inhibitor of Fortilin is a nucleic acid containing a promoter operably linked to a nucleic acid segment encoding at least 30 contiguous nucleotides of SEQ ID NO:1.

15. (withdrawn) The method of claim 14, wherein the nucleic acid segment is positioned, in reverse orientation, under the control of a promoter that directs expression of an antisense product.

16. (withdrawn) The method of claim 1, wherein the cell is in an animal.

17. (withdrawn) A method of treating a patient with a hyperproliferative disease or condition comprising administering to the patient an amount of a Fortilin inhibitor effective to reduce Fortilin activity, thereby conferring a therapeutic benefit on the subject.

18. (withdrawn) The method of claim 17, wherein the hyperproliferative disease or condition is cancer.

19. (withdrawn) The method of claim 18, wherein the cancer is cancer of the bladder, blood, bone, bone marrow, brain, breast, colon, esophagus, gastrointestine, gums, head, kidney, liver, lung, nasopharynx, neck, ovary, prostate, skin, stomach, testis, tongue, or uterus.

20. (withdrawn) The method of claim 17, wherein the hyperproliferative disease or condition is atherosclerosis.

21. (withdrawn) The method of claim 17, wherein the Fortilin inhibitor is provided to the patient by an expression vector comprising a promoter operably linked to a nucleic acid sequence encoding the inhibitor.

22. (withdrawn) The method of claim 21, wherein the expression vector comprises a viral vector.

23. (withdrawn) The method of claim 22, wherein the viral vector is a vaccinia virus, adenovirus, herpesvirus, retrovirus, cytomegalovirus, and adeno-associated virus.

24. (withdrawn) The method of claim 21, wherein the expression vector is delivered endoscopically, intravenously, intralesionally, percutaneously, or subcutaneously.

25. (withdrawn) The method of claim 21, further comprising administering a second anti-cancer treatment.

26. (withdrawn) The method of claim 21, wherein the second anti-cancer treatment is surgery, gene therapy, chemotherapy, radiotherapy, or immunotherapy.

27. (withdrawn) The method of claim 26, wherein the second anti-cancer treatment is chemotherapy.

28. (withdrawn) The method of claim 27, wherein the chemotherapy comprises etoposide.

29. (withdrawn) A method of treating a patient with cancer comprising administering to the a subject a Fortilin modulator and a second anti-cancer treatment.

30. (withdrawn) The method of claim 29, wherein the second anti-cancer treatment is surgery, gene therapy, chemotherapy, radiotherapy, or immunotherapy.

31. (withdrawn) The method of claim 29, wherein the second anti-cancer treatment is chemotherapy.

32. (withdrawn) The method of claim 31, wherein the chemotherapy comprises etoposide.

33. (withdrawn) A method of inhibiting apoptosis in a cell comprising providing to the cell a Fortilin polypeptide in an amount effective to inhibit apoptosis in the cell.

34. (withdrawn) The method of claim 33, further comprising administering a Fortilin enhancer in an amount effective to increase Fortilin activity.

35. (withdrawn) The method of claim 33, wherein the cell is provided a Fortilin polypeptide by providing an expression vector comprising a polynucleotide encoding a Fortilin polypeptide under the transcriptional control of a promoter, wherein the cell expresses the Fortilin polypeptide.

36. (withdrawn) A method of inhibiting apoptosis in a cell comprising administering to the cell an expression vector comprising a polynucleotide encoding a Fortilin polypeptide under the transcriptional control of a promoter, wherein expression of the Fortilin polypeptide is at a level effective to inhibit apoptosis in the cell.

37. (withdrawn) The method of claim 36, wherein the Fortilin polypeptide comprises at least 20 contiguous amino acids from SEQ ID NO:2.

38. (withdrawn) The method of claim 36, wherein the polynucleotide comprises at least 40 contiguous nucleic acids from SEQ ID NO:1.

39. (currently amended) A method of identifying a modulator of a Fortilin polypeptide comprising:

(a) contacting a Fortilin polypeptide with at least 90% [[70%]] of its amino acids identical ~~or functionally equivalent to SEQ ID NO:2 or that has at least 20 contiguous amino acids from SEQ ID NO:2~~ with a candidate substance; and

(b) assaying whether the candidate substance enhances or inhibits ~~modulates~~ the Fortilin polypeptide activity, wherein a candidate substance that enhances or inhibits Fortilin polypeptide activity is a modulator of the Fortilin polypeptide.

40. (previously presented) The method of claim 39, wherein the assaying compares the activity of the Fortilin polypeptide in the presence and absence of the candidate substance.

41. – 45. (cancelled)

46. (original) The method of claim 41, wherein the assaying is done by determining whether a p53-Fortilin interaction is disrupted.

47. (original) The method of claim 41, wherein the assaying is done by determining whether a MCL1-Fortilin interaction is disrupted.

48. (withdrawn) A method of diagnosing cancer in a subject suspected of having cancer comprising:

(a) obtaining a sample from the subject;

(b) evaluating Fortilin in the sample.

49. (withdrawn) The method of claim 48, wherein evaluating Fortilin comprises assaying the amount of Fortilin polypeptide.

50. (withdrawn) The method of claim 49, wherein the assaying employs an antibody that specifically binds Fortilin.

51. (withdrawn) The method of claim 48, wherein evaluating Fortilin comprises evaluating a genomic DNA sequence encoding Fortilin.

52. (withdrawn) The method of claim 48, wherein evaluating Fortilin comprises evaluating the amount of messenger RNA encoding Fortilin.

53. (withdrawn) A method of preventing apoptosis in a cell comprising providing to the cell an effective amount of Fortilin polypeptide, wherein the Fortilin polypeptide binds MCL1 in the cell and the cell does not undergo apoptosis mediated by p53.

54. (withdrawn) The method of claim 52, wherein the Fortilin polypeptide comprises 20 contiguous amino acids of SEQ ID NO:2.

55. (withdrawn) The method of claim 52, wherein the Fortilin polypeptide comprises amino acids 5 to 22 of SEQ ID NO:2.

56. (withdrawn) The method of claim 52, wherein the Fortilin polypeptide is provided to the cell by an expression vector comprising a promoter operably linked to a nucleic acid sequence encoding Fortilin.

57. (withdrawn) The method of claim 53, wherein the cell is a muscle cell.

58. (withdrawn) The method of claim 57, wherein the muscle cell is a myocyte.

59. (withdrawn) The method of claim 53, wherein the cell is a neuronal cell.

60. (withdrawn) A method of treating a patient with a spinal cord injury comprising administering to the subject an effective amount Fortilin, wherein a therapeutic benefit is conferred to the subject.

61. (withdrawn) A method of preventing muscle atrophy in a subject comprising administering to the subject an effective amount of Fortilin to inhibit apoptosis in a muscle cell.

62. (withdrawn) A method of treating a patient with myocarditis or acute myocardial infarction comprising administering to a myocyte cell in the subject an effective amount of Fortilin to inhibit apoptosis of the myocyte cell.

63. (previously presented) The method of claim 39, wherein the candidate substance is a polypeptide.

64. (previously presented) The method of claim 63, wherein the polypeptide is an antibody.

65. (previously presented) The method of claim 39, wherein the candidate substance is a nucleic acid.

66. (previously presented) The method of claim 39, wherein the candidate substance is a small molecule.

67. (previously presented) The method of claim 39, wherein the Fortilin polypeptide is in a cell.

68. (Currently amended) A method of identifying a modulator of a Fortilin polypeptide comprising:

(a) contacting a candidate modulator with a recombinant cell expressing a Fortilin polypeptide with at least 90% [[70%]] of its amino acids identical or functionally equivalent to SEQ ID NO:2 ~~or that has at least 20 contiguous amino acids from SEQ ID NO:2~~;

(b) measuring the level of Fortilin activity or expression of the cell; and,

(c) comparing the level of Fortilin activity or expression of the cell to the level of Fortilin activity or expression of a cell not contacted with the candidate modulator,

wherein a difference between the level of Fortilin activity or expression indicates that the candidate modulator is a modulator of a Fortilin polypeptide.

69. (previously presented) The method of claim 68, wherein the level of Fortilin activity is measured.

70. (previously presented)The method of claim 69, wherein the Fortilin activity is protein binding.

71. (previously presented) The method of claim 70, wherein the Fortilin activity is p53 binding.

72. (previously presented) The method of claim 69, wherein the Fortilin activity is MCL1 binding.

73. (previously presented)The method of claim 69, wherein the Fortilin activity is cell cycle progression.

74. (previously presented) The method of claim 69, wherein the Fortilin activity is prevention of apoptosis.

75. (previously presented) The method of claim 68, wherein the level of Fortilin expression is measured.

76. (previously presented) The method of claim 75, wherein the level of Fortilin polypeptide is measured.

77. (previously presented) The method of claim 75, wherein the level of Fortilin mRNA is measured.

78. (previously presented) The method of claim 75, wherein Fortilin half-life is measured.

79. (previously presented) The method of claim 68, wherein the candidate substance is a polypeptide.

80. (previously presented) The method of claim 79, wherein the polypeptide is an antibody.

81. (previously presented) The method of claim 68, wherein the candidate substance is a nucleic acid.

82. (previously presented) The method of claim 81, wherein the nucleic acid comprises at least 20 contiguous nucleotides identical or complementary to SEQ ID NO:1.

83. (previously presented) The method of claim 68, wherein the candidate substance is a small molecule.

84. (previously presented) The method of claim 39, wherein the Fortilin polypeptide is a mammalian Fortilin polypeptide.

85. (previously presented) The method of claim 84, wherein the mammalian polypeptide is a human Fortilin polypeptide.

86. (previously presented) The method of claim 68, wherein the Fortilin polypeptide is a mammalian Fortilin polypeptide.

87. (previously presented) The method of claim 86, wherein the mammalian polypeptide is a human Fortilin polypeptide.

88. (previously presented) The method of claim 68, wherein the candidate modulator acts directly on a Fortilin gene or Fortilin RNA.

89. (previously presented) The method of claim 68, wherein the Fortilin polypeptide is exogenous with respect to the cell.

90. (new) The method of claim 39, wherein the Fortlin polypeptide has the amino acid sequence of SEQ ID NO:2.

91. (new) The method of claim 68, wherein the Fortilin polypeptide has the amino acid sequence of SEQ ID NO:2.

92. (new) The method of claim 41, wherein the assaying involves assaying for